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EXAMINER

KAMEN, NOAH P

ART UNIT	PAPER NUMBER
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3747

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Mesurier (1665885).

Figure 1 shows a water spraying system including a nozzle 11, a speed responsive delivery mechanism at 14, and a **temperature control mechanism at 24**. The nozzle is deemed able to produce a mist.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner (5148776) in view of Mesurier (1665885).

Conner shows a nozzle/valve element 13 that delivers water based on load (figure 7) as determined by a controller 10.

In regard to claim 2, a plurality of nozzles may be used (col.6, lines 3+).

Claim 3 is so broad as to read on any system.

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In claim 7, the frame reads on the intake manifold.

In regard to claims 12 and 13, there is a pump 17 with a regulator 18.

However, no water heating means are disclosed.

Mesurier shows a water spraying system including a nozzle 11, a speed responsive delivery mechanism at 14, and a **temperature control mechanism at 24** for improving combustion; therefore to include a temperature control device in Conner would have been obvious to one of ordinary skill in the art.

Claims 1-3 and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill et al (4960080) in view of Mesurier.

Figure 1 in O'Neill et al shows two nozzles 60, 62 for spraying water into an engine wherein the system is controlled by engine load (col.2, lines 25+).

In regard to claims 8 and 9, see regulator 32.

In regard to claims 10-12, there is an electric pump 10 providing constant flow communicating with a relief valve 18 (col.4, lines 15+).

In regard to claims 13 and 16, alcohol in the water mixture reads on cleaning and a second pressure medium (col.3, lines 67+).

In regard to claim 14, see col. 4, line 36.

In regard to claim 15, see col.3, lines 11+.

However, no water heating means are disclosed.

Mesurier shows a water spraying system including a nozzle 11, a speed responsive delivery mechanism at 14, and a **temperature control mechanism at 24** for improving combustion; therefore to include a temperature control device in O'Neill et al would have been obvious to one of ordinary skill in the art.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner in view of Mesurier as applied to claim 1 above, and further in view of Iizuka et al (4165610). Conner shows an engine in which all the cylinders are operated. Iizuka et al disclose variable displacement engine to improve fuel economy. It would have been obvious to one of ordinary skill in the art to modify the engine of Conner to include variable displacement operation; the result of which will control the number of nozzles and their point of injection.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noah Kamen whose telephone number is 571 272 4845. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on 571 272 4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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Art Unit 3747

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